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10/736,851	12/17/2003	Seppo Huotari	60282.00146	4832

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EXAMINER

AHMED, SALMAN

ART UNIT	PAPER NUMBER
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2619

MAIL DATE	DELIVERY MODE
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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/736,851

Applicant(s)

HUOTARI ET AL.

Examiner

Salman Ahmed

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12/17/2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,8 and 9 is/are rejected.
- 7) ☒ Claim(s) 2-7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12/17/2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☒ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claims 1-9 are pending.

Claims 1, 8 and 9 are rejected.

Claims 2-7 are objected to.

Copy of Priority Document not in record

1. The instant Application claims priority of International Application No. PCT/EP01/06844. However, a copy of the priority document was not provided by the Applicant. Examiner respectfully requests the copy of the said priority document.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: (page 10 line 7) element number S134. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The Abstract in current Application has words "means" and "said" in numerous places. Proper correction is requested.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bharatia (US PAT PUB 2001/0031635) in view of Foti et al. (US PAT 6546247, hereinafter Foti) and Foti et al. (US PAT 6751204, hereinafter Foti_2).

In regards to claim 1, Bharatia teaches *a method of routing a terminated call to a subscriber from an Internet Protocol based domain (Figure 1A, multimedia IP network 104) to a circuit switched domain (Figure 1A, a Public Switched Telephone Network (PSTN) and/or GSM public land mobile network (PLMN, in combination PSTN/PLMN) 102), wherein Internet Protocol based domain has call state control functionalities implemented (Figure 1A, Call State Control Functions (CSCFs) 110A and 110B), method comprising the steps of receiving an invitation of subscriber for a call (section 0077, call setup) by at least one call state control functionality (Figure 1A, Call State Control Functions (CSCFs) 110B) within Internet Protocol based domain (section 0076-0077, The CSCF 110B also interacts with other system components to perform query address handling operations. In some of these operations, the CSCF 110B*

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communicates with the HSS 112. In providing the CCFs, the CSCF 110B provides call setup, termination, and state/event management); *obtaining the profile of subscriber from home subscriber serving* (Figure 1A, HSS 112) *means to a call state control functionality* (section 0078, For a serviced subscriber, the CSCF 110B interacts with the HSS 112 of the home domain of the subscriber and receives profile information an all-IP network user); *requesting further routing information from home subscriber serving means* (section 0080, the HSS 112 could provide support to the call control servers in order to complete the routing/roaming procedures) *and establishing call via gateway means* (The Media Gateway Function (MGW) 120A and 120B) *for connecting domains as well as via visited switching means* (Figure 1A, The Transport Signaling Gateway Function (T-SGW) 114) to subscriber (Figure 1A and section 0088, The Media Gateway Function (MGW) 120A and 120B is the PSTN/PLMN 102 transport termination point for the network infrastructure. The MGW 120 may terminate bearer channels from the PSTN/PLMN 102. The MGW 120 may also support media conversion).

Bharatia does not explicitly teach *requesting a switching means within circuit switched domain currently visited by subscriber for roaming number by home subscriber serving means; returning roaming number of subscriber to home subscriber serving means by visited switching means*.

Foti in the same field of endeavor teaches *requesting a switching means* (serving MSC) *within circuit switched domain currently visited by subscriber for roaming number by home subscriber serving means* (HLR) *and returning roaming number of subscriber to home subscriber serving means* (HLR) *by visited switching means* (column 1 lines

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58-60, the HLR requests a roaming number from the serving MSC, and returns the roaming number to the interrogating switch).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Bharatia's method by incorporating the steps of requesting a switching means within circuit switched domain currently visited by subscriber for roaming number by home subscriber serving means; returning roaming number of subscriber to home subscriber serving means by visited switching means as suggested by Foti. The motivation is that by forwarding the roaming number (obtained from the serving MSC) to the interrogating switch HLR enables the interrogating switch to be aware of the number to send the data to thus enabling a successful and seamless communication.

Bharatia and Foti does not explicitly teach *returning roaming number as routing information from home subscriber serving means to call state control functionality*.

Foti_2 in the same field of endeavor *teaches returning roaming number routing information from home subscriber serving means to call state control functionality* (Figure 2A, column 5 lines 41-42, At 99, the HSS sends the TLDN to the Home CSCF)).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Bharatia and Foti's method by incorporating the steps of returning roaming number as routing information from home subscriber serving means to call state control functionality as suggested by Foti_2. The motivation is that by forwarding the roaming number from the home subscriber serving means to the call

state control functionality enables the call state control functionality to be aware of the number to send the data to thus enabling a successful and seamless communication.

In regards to claim 8, Bharatia teaches *a serving call state control functionality device for providing a routing service to a circuit switched domain, serving call state control functionality device providing a functionality of an Internet Protocol based domain* (section 0078, the CSCF 110B maintains and manages the SPD. For a serviced subscriber, the CSCF 110B interacts with the HSS 112 of the home domain of the subscriber and receives profile information an all-IP network user. The CSCF 110B stores some of the profile information in the SPD. Upon an access of the system, the CSCF 110B notifies the subscriber's home domain of the initial access. The CSCF 110B may cache access related information e.g., terminal IP address(es) where the subscriber may be reached, etc).

7. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bharatia in view of Foti.

In regards to claim 9 Bharatia teaches *a home subscriber serving device* (Figure 1A, HSS 113) *capable of using routing information for terminating a call to a subscriber* (section 0083, in its normal operations, the HSS 112 performs: (1) Management Application Protocol (MAP) termination; (2) Addressing protocol termination; (3) Authentication, Authorization protocol termination; and (4) IP Multimedia (MM) Control Termination), *comprising an IP multimedia part and a home location registering part interfaced to each other* (section 0082, The HSS 112 consists of the following functionalities: (1) user control functions required by the IM CN subsystem; (2) a subset

of prior generation Home Location Register (HLR) functionality required for the packet-switched domain; and (3) a circuit-switched portion of the prior generation HLR, if it is desired to enable subscriber access to the circuit-switched domain or to support roaming to legacy GSM/UMTS circuit-switched domains).

Bharatia does not explicitly teach *home location registering part comprises transceiver means, of requesting and receiving roaming numbers from the circuit switched domain*.

Foti in the same field of endeavor teaches *home location registering part comprises transceiver means* (column 1 lines 58-60, HLR has means to transmit request for roaming number and has receiving means to receive the same) *of requesting and receiving roaming numbers from the circuit switched domain* (column 1 lines 58-60, the HLR requests a roaming number from the serving MSC, and returns the roaming number to the interrogating switch).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Bharatia's method by incorporating the steps of requesting a switching means within circuit switched domain currently visited by subscriber for roaming number by home subscriber serving means; returning roaming number of subscriber to home subscriber serving means by visited switching means as suggested by Foti. The motivation is that by forwarding the roaming number (obtained from the serving MSC) to the interrogating switch HLR enables the interrogating switch to be aware of the number to send the data to thus enabling a successful and seamless communication.

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Allowable Subject Matter

8. Claims 2-7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Salman Ahmed whose telephone number is (571) 272-8307. The examiner can normally be reached on 8:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (571) 272-3088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Patent Examiner

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